AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1.   (Canceled)

2.   (Currently Amended) The method according to claim ~~1~~ 8, further comprising:

adjusting the magnetic flux estimation using the estimated resistance.

3.   (Currently Amended) The method according to claim ~~1~~ 8, further comprising:

establishing a mutual position between a first and a second part of a reluctance machine in response to the current signal and the magnetic flux estimate.

4.   (Currently Amended) The method according to claim ~~1~~ 8, further comprising:

establishing a current reference value in response to a torque reference value and the magnetic flux estimate.

5.   (Currently Amended) The method according to claim ~~1~~ 8, wherein the resistance estimation further comprises:

determining a relation or a difference value between the magnetic flux estimate and the current signal; and

adjusting the estimated resistance depending on the difference value or the relationship value.

6.   (Original) The method according to claim 5, wherein the adjustment of the estimated resistance influences a subsequently produced magnetic flux estimate so that the absolute value of the difference value is minimized.

7.   (Original) The method according to claim 5, wherein the adjustment of the estimated resistance comprises:

increasing the estimated resistance when the difference value has a first sign and reducing the estimated resistance when the difference value has a second sign.

8.   (Previously Presented) A method for estimating a resistance in at least one phase winding in a reluctance machine, the method comprising:

receiving a signal indicating a voltage across the at least one phase winding;

receiving a signal indicating a current through the at least one phase winding;

estimating a magnetic flux in response to the voltage signal and the current signal; and

estimating the resistance in the phase winding in accordance with a phase relation between the current signal and the magnetic flux estimate;

wherein the resistance estimation further comprises:

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determining a relation or a difference value between the magnetic flux estimate and the current signal; and

adjusting the estimated resistance depending on the difference value or the relationship value;

wherein the adjustment of the estimated resistance comprises:

determining a phase difference between the magnetic flux estimate and the current signal; or

determining an amplitude of the magnetic flux estimate at a predetermined amplitude level of the current signal.

9.   (Currently Amended) The method according to claim ~~4~~ 8, further comprising:

generating a winding temperature value on a basis of said estimated resistance.

10.   (Original) The method according to claim 9, wherein said winding temperature value is based on information including:

the phase winding resistance at a certain temperature; and

a temperature coefficient for a material in said phase winding.

11.   (Currently Amended) A device for estimating a resistance in at least one phase winding in a reluctance machine having at least two mutually movable parts, said phase winding having an inductance which depends on the mutual position of the parts; the device comprising:

an input for receiving a signal indicating a voltage across the at least one phase winding;

an input for receiving a signal indicating a current through the at least one phase winding;

a microprocessor; and

a memory having a computer program to direct the microprocessor to perform a process of estimating an instantaneous resistance; wherein

the microprocessor is coupled to the memory and to the signal inputs such that, during execution of the computer program, the microprocessor performs the process of

receiving a signal indicating a voltage across the at least one phase winding,

receiving a signal indicating a current through the at least one phase winding;

estimating a magnetic flux in response to the voltage signal and the current signal; and

estimating the resistance in the phase winding in accordance with a phase relation between the current signal and the magnetic flux estimate during execution of the estimate;

wherein the resistance estimation further comprises:

determining a relation or a difference value between the magnetic flux estimate and the current signal; and

adjusting the estimated resistance depending on the difference value or the relationship value;

wherein the adjustment of the estimated resistance comprises:

determining a phase difference between the magnetic flux estimate and the current signal; or

determining an amplitude of the magnetic flux estimate at a predetermined amplitude level of the current signal.

12. (Currently Amended) A computer program product for estimating a resistance in at least one phase winding in a reluctance machine having at least two mutually movable parts, said phase winding having an inductance which depends on the mutual position of the parts; the computer program product comprising:

a recording medium; and

a computer program recorded on the recording medium to direct a microprocessor to perform the process of:

receiving a signal indicating a voltage across the at least one phase winding;

receiving a signal indicating a current through the at least one phase winding;

estimating a magnetic flux in response to the voltage signal and the current signal; and

estimating the resistance in the phase winding in accordance with a phase relation between the current signal and the magnetic flux estimate;

wherein the resistance estimation further comprises:

determining a relation or a difference value between the magnetic flux estimate and the current signal; and

adjusting the estimated resistance depending on the difference value or the relationship value;

wherein the adjustment of the estimated resistance comprises:

determining a phase difference between the magnetic flux estimate and the current signal; or

determining an amplitude of the magnetic flux estimate at a predetermined amplitude level of the current signal.